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XXVII.—*On the Nesting of Nyctibius jamaicensis and Sclerurus umbretta.* By Dr. EMIL A. GOELDI, C.M.Z.S., Director of the Museum in Pará.

+1. NYCTIBIUS JAMAICENSIS.*

The life-history of the gigantic Goatsuckers which form the subfamily of the Nyctibiinæ is not yet sufficiently cleared up. Even in 1892 Mr. Hartert, working out the part of the most useful 'Catalogue of the Birds in the British Museum' which refers to the family Caprimulgidæ, remarked that "but little is known about their habits."

The subfamily consists of one genus only, with six species, all neotropical (*Nyctibius bracteatus*, *N. leucopterus*, *N. jamaicensis*, *N. longicaudatus*, *N. athereus*, and *N. grandis*). Of these six species I have met with in Brazil only three, namely, *Nyctibius jamaicensis* and *N. athereus* in the southern coast States (Rio de Janeiro), and *N. grandis* in the Amazonian region (Marajó) and on the borders of Guiana (Connaný, Amapá). Mr. Hartert, whom I suppose to be well informed about all ornithological publications, old and new, cites notes upon nidification only for *N. athereus* and *N. grandis*; another authority is, it seems, Koenig-Warthausen, in the 'Journal für Ornithologie,' 1868. Unfortunately, I do not possess this work.

* [There is nothing original on *Nyctibius* in this article.—EDD.]

Thienemann, in his work 'Fortpflanzungsgeschichte der gesammten Vögel' (1845-56), figures, on plate xlii. fig. 20, what he calls an egg of *N. athereus*, but the volume of text, which would give us some information as to the authenticity of the object, was never published, I believe. Burmeister in his 'Systematische Uebersicht' (1856, vol. ii. p. 375), writes that he got an egg of *N. grandis* from Beske, a collector at that time living in Novo Friburgo (Serra dos Orgãos, Rio de Janeiro). This egg was described in Cabanis's 'Journal für Ornithologie' (vol. i. p. 169); but Burmeister confessed to me afterwards personally his doubts on many identifications made by Beske*, and, as things stand, I think there is no certainty whether the egg in question was really that of *N. grandis* or of any other species of *Nyctibius*.

Burmeister (Th. Bras. ii. p. 375) says that these eggs of *N. grandis*—giving us thus to understand that there were at least two—are laid in the hollow of an open branch, without any foundation. Treating of *N. cornutus* (= *N. jamaicensis*), the same author writes (*op. cit.* p. 377) as follows:—"It is said that the bird does not construct a nest, but fixes its eggs to the tree-branches with a viscous fluid; that the nestlings remain sitting in the fixed half of the egg-shell until able to fly. But Azara's friend, Nosedá, found the real nest in the hole of a tree, with two mottled-brown eggs."

As stated above, I met with *N. jamaicensis* and *N. athereus* in Southern Brazil, the former, a smaller species, being much more common than the latter: at least this was certainly the case in the mountains of the Serra dos Orgãos.

In my own collection, made at Colonia Alpina, near Theresopolis, during the years 1891-94, *N. jamaicensis* is represented by half a dozen specimens, *N. athereus* only by

* This reminds me of what I have written about *Didelphys alboguttata* (P. Z. S. 1894, p. 466). I also convinced Burmeister that he had confounded together several caterpillars and butterflies obtained in Novo Friburgo, which he had identified on the authority of Beske and described and figured in his work 'Lépidoptères de la République Argentine.'

one. Both species are more or less rufous, but easily distinguishable, and any confusion about their determination is impossible.

During certain months the smaller *N. jamaicensis*, called "Urutáo" by the natives, like all the species of the group, is heard at Colonia Alpina almost every night. Its "pū-hū-hū," slowly pronounced, but with much energy, is a constant nocturnal sound, quite enough to frighten a timid wanderer in the solitary forest-patches*. On the other hand, I was often astonished at the resemblance of the voice of the large greyish *N. grandis* to the mewing of a cat. In November 1895, during moonlight nights, I had occasion to hear it at Amapá regularly. The bird called continuously in the adjacent "sirinbal" (the inundated and impassable avicennia-forests), which borders in a most characteristic manner the lower course of the coast-rivers of Guiana. At Colonia Alpina (Rio de Janeiro) we got so well acquainted with *N. jamaicensis* that the cry of the bird in the neighbourhood on moonlight nights was the regular signal for us to take up our guns and go forth on our nocturnal hunting-trips. The bird is easily deceived by imitating its voice†. Supposing the call to be that of a rival, it leaves some inaccessible and invisible standpoint in the interior of the forest and is drawn nearer to a post on some isolated dry gigantic tree, which, being in better light, offers more chance of a successful shot. Even here, however, its wonderful protective colour, its singular manner of perching in the direction of the axis of the branch and appearing like a mere protuberance of it, while it retains a motionless position for a quarter of an hour or more, render it very difficult to discern, except to very practised eyes. My cousin,

* It is not to be wondered at that the "Urutáos" are much connected with Brazilian folklore, as shown by José Verissimo in his 'Scenas da Viva Amazonica,' Lisbon, 1887, and by myself in my little work 'Aves do Brazil,' pp. 198, 199.

† On the contrary, the smaller Goatsuckers (such as *Nyctidromus*, *Antrostomus*, *Chordeiles*, &c.) are far less easily deceived and seem to distinguish the imitation much better.

Andreas Goeldi, after long experience, is a perfect *Nyctibius*-hunter. Notwithstanding our familiarity with the habits of this species of *Nyctibius*, for three years we were never lucky enough to discover its breeding-place, though we made all possible efforts. Before I left Colonia Alpina I strongly recommended the continuation of these efforts to my cousin, and likewise as regards *Hydropsalis**. At length, some months after my arrival on the Amazons, I received the agreeable news of the discovery of an authentic nest of *N. jamaicensis*. My cousin's letter was accompanied by detailed notes and photographs, and when, in August 1895, I made a journey back to Rio de Janeiro, I had, on a short visit to Colonia Alpina, the opportunity of seeing the localities and studying the facts, which were as follows:—

On the 24th of November, 1894, the son of one of our neighbours and colonists brought to us a dead male *Nyctibius jamaicensis* and a fresh egg, telling us that he had shot the "Urutáo" standing upright on the top of a stump. After having killed the bird he climbed up the stump and found, as he had supposed, that the bird had its breeding-place there. In a slight depression on the top he found the egg, which he carefully brought to my cousin, together with the bird itself. My cousin immediately went to the spot pointed out by the boy, and inquired minutely into every detail.

The locality is on a sloping hill on the left side of a brook, tributary of the Rio Alpina, which runs through a valley parallel to that of the centre of the colony. In 1891 and 1892 one of our colonists, now dead, had a maize plantation there, but since that time the ground has become what in Brazil is called "capoeira," *i. e.*, a hill covered with shrubs and small trees of about 2 m. in height. Along the declivity of the right side of the brook, at a distance of about

* *Hydropsalis forcipata* is common in the Serra dos Orgãos. We often shot two or three specimens in the same night. But, notwithstanding the indications given about the nidification of *Hydropsalis* in Uruguay by O. V. Aplin (Ibis, 1894, p. 188), no breeding-place has yet been discovered by us at Colonia Alpina.

30 m. from the latter, is a path of communication between the different colonial lots of the valley and the forest-slopes on both sides. The stump in question is about 20 m. distant from the brook, surrounded by shrubs and easily visible from the path on the other side, and was evidently put there three years ago by the former colonist. The nearest human residences are distant from five to six minutes only.

Fig. 1.



Nest and egg of *Nyctibius jamaicensis* on the top of a stump.

The stump, still partly covered with its original bark, has a height of 1.8 m. above the level of the ground. Its diameter at top is 9.5 cm. The top has in the centre a small depression, caused by decomposition, and scarcely presents sufficient room for a rather large egg. There was no trace of a softer substratum or nest-material.

The egg (fig. 2, p. 304), which waits for an opportunity to be sent to the British Museum, measures 41.5 mm. in the longitudinal axis and 30.5 mm. in the transverse axis. Its general colour is white. On the blunt pole, however, are some very delicate pale violet spots, and irregularly distributed over the whole surface are some large ones of brownish-

rufous colour, resembling drops of dried blood. Neither the former nor the latter markings can be effaced by washing

Fig. 2.

Egg of *Nyctibius jamaicensis*.

with spirit; they belong properly to the egg, which is of a very elegant shape.

Burmeister gives the following measures for the egg of *Nyctibius grandis*:—60 mm. longitudinal axis, 42 mm. transverse axis. These measures are those of a larger egg, but the relative proportions which determine the general shape of the egg agree pretty well, being in both cases almost exactly 4:3. The assertion of the boy that he saw the bird standing upright on the top of the stump, so that he at first took the bird for an elongation of it, deserves attention, as agreeing perfectly with what I always heard from persons well acquainted with the habits of the “Urutáos.”

If these birds are rarely met with during the day, even in the region where they do not seem to be at all rare, it is evidently due to the highly protective position they assume, a position so admirably in conformity with the general colour and character of the bird that I think it to be one of the most interesting facts in natural history. The authentic fact here stated is a new proof of the supposition that the *Nyctibii* breed on suitable places on tree-branches, stumps, &c., while the smaller Goatsuckers probably all nest

on the ground. Though I am personally acquainted only with the breeding-habits of *Nyctidromus albicollis* (nests with eggs of which are of common occurrence in rough grassy meadows in the southern States of Brazil), the recent discovery of the nesting of *Hydropsalis*, made by Aplin in Uruguay, confirms this opinion.

2. SCLERURUS UMBRETTA.

In the solitary forests of the province of Rio de Janeiro, in the hot lowland as well as in the mountains of the Serra dos Orgãos, is sometimes observed a dark brown bird, which attracts our attention by its peculiar habits. It is fond of quiet, shady places. Exceedingly busy, it capers about quickly near and on the ground, creeps between the dry branches very like a Spine-tail (*Synallaxis*), and enters the holes and cavities formed near the roots of the larger forest-trees. Its dark colour, together with its active and lively movements, will generally at the first impression lead us to believe that we have to do with some small mammal, such as a mouse. With some attention, and when our eyes get accustomed to distinguish details in the shade of the dark and dense forest, its bird-nature will be recognized. The bird is tolerably confiding, and will allow you to approach within a distance of eight or ten steps. From time to time you will perceive a very sensible noise, produced by the bird. It has found a heap of dried leaves, and is now occupied with a careful examination of the vegetable detritus and mud often accumulated in such localities. Seizing with the bill the leaves, one by one, it throws them away vigorously. Evidently it hunts up larvæ and small insects, after the fashion of a scraping hen.

A similar impetuosity and noisy demeanour among the dry leaves of the bamboo-forest are displayed by an allied bird of the family Dendrocolaptidæ, *Anabazenops rufosuperciliatus*.

Long ago Prince Max. zu Wied had observed *Sclerurus umbretta* engaged as described above. Its noisy way of throwing leaves about we often witnessed in the extensive

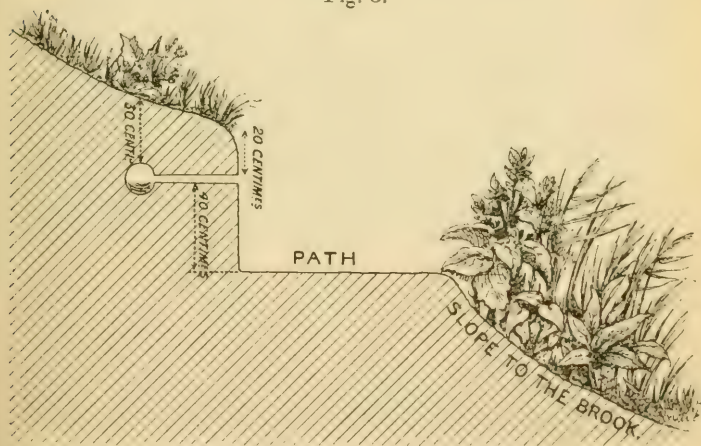
forests of Colonia Alpina, Serra dos Orgãos. The natives of this district know the bird well under the trivial name "virafolha," that is "leaf-overthrower." Burmeister and Ménétriés, however, declare that they never observed any such action. Since the time of Ménétriés nobody has written about the nesting of *Sclerurus*, and even the description given by that author affords no clear idea respecting the matter. He writes, in his 'Monographie de la famille des Myiotherinæ' (1834):—"Cet oiseau (*Oxyppyga scansor*, Ménétriés) vit solitaire dans les vieilles capouaires, sautille continuellement à terre, et se fourre souvent dans les broussailles; il grimpe aussi les vieux troncs d'arbres, où il cherche ces grosses fourmis frugivores qui abondent dans ces parages; son cri est analogue à celui de notre moineau *Fringilla domestica*; le Prince de Neuwied nous apprend que son *Tinactor fuscus* jette les feuilles en l'air, etc., ce que je n'ai pas remarqué. Dans un trou de fourmilière Termites je trouvai à deux reprises différentes deux œufs roussâtres tachetés de couleur plus foncée; ces œufs restèrent environ quinze jours à éclore, après lesquels en sortit le jeune oiseau couvert de duvet roussâtre, ayant les plumes des ailes et de la queue développées de six lignes; je fus chaque jour visiter l'endroit, et le troisième jour ces petits avaient disparu. Cette espèce est commune dans la province de Rio de Janeiro, surtout dans les vieilles capouaires près de Sumidorio, à environ quarante lieues de la capitale; je la trouvai rarement dans la province de Minas Geraes" (*op. cit.* p. 521).

On the 19th December, 1894, my cousin discovered casually, on a hunting excursion, the breeding-place and nest of *Sclerurus umbretta*. The locality is in a wild and very romantic mountain-valley in the upper course of the Rio Alpina, certainly not less than from 900 to 950 m. above the sea-level. In August, 1895, I visited the spot, accompanied by my cousin, and am therefore able to enter into details on the subject.

On both sides of the brook—in the rainy season a most turbulent mountain-torrent—are steep slopes, covered with dense, high, and magnificent forests, visited only by hunters

and woodcutters. On the right slope there exists a sunken path for the woodcutters, at a distance of about 900 m. from the brook and an altitude of about 80 m. above the level of the Rio Alpina. In this steep bank, on the side of the path, in the dark and dense forest, far from any human habitation, Andreas Goeldi observed a bird creeping out of a hole. Keeping himself quiet, he soon recognized a "vira-folha," the nest of which he knew to be one of my particular desiderata. He commenced to explore the hole, which led to a covered gallery. After having examined the direction and dimensions of the gallery, he dug in continuously and discovered the nest with two fresh eggs. The hole and gallery measured 5 cm. in diameter, the shape being circular. Both were horizontal, smooth, and remarkably clean. The gallery, instead of running in a straight line, made a deviation to the right. It finished with a terminal cavity containing the bird's nest. The arrangement is shown in the following sketch.

Fig. 3.



Transverse section of nesting-hole of *Sclerurus umbretta*.

The nest itself measures 21 cm. in diameter; it is not vaulted, but flat and open. The material is somewhat intricately woven, and the nest cannot be called a master-

piece of art. The nest is formed only of the dry leaf-ribs of a certain tree; the tree seems to be a species of "Jacaranda" (*Dalbergia*), as we find on careful comparison and

Fig. 4.

Nest and eggs of *Sclerurus umbretta*.

with much practical experience in the flora of these mountain regions.

The two eggs are pure white. Their longitudinal axis measures 28 mm., the transverse axis 21 mm. The nest and eggs are preserved, and will be sent, when there is an opportunity, to the British Museum.

My cousin finally shot the bird, which had returned and was very anxious at the plundering and violation of its breeding-place. Its skin remains as "corpus delicti" in my orni-

thological collection from the Serra dos Orgãos, which I left under the care of my cousin at Colonia Alpina.

Ornithologists will see that our careful observations do not agree with the statements of Ménériés. It need not, however, be supposed that this author invented his statements. They may be explained by supposing that he confounded *Sclerurus* with some other bird. *Sclerurus* is, as Mr. Selater remarks, an isolated aberrant genus. If the statements as to its nidification and the colour of its egg, as given by Ménériés, were true, its affinity with the Formicariidæ would gain probability. But, proved as it is now that the bird is a hole-breeder and that it has pure-white eggs, the systematic position of *Sclerurus* among the Dendrocolaptidæ, as proposed by Mr. Selater, becomes a scientific necessity.

XXVIII.—On some Chinese Species of the Genus *Alcippe*.

By F. W. STYAN.

As some confusion exists as regards those Chinese species of *Alcippe* which are closely allied to *A. nipalensis* of India, I have lately attempted to clear up the difficulty by a careful examination of a long series of examples from various districts. Mr. de La Touche and Mr. Rickett have kindly entrusted me with their Formosan and Fukien specimens; my own collector sends a number of skins from Ichang, in Western China; and the fine set in the British Museum, with which the late Mr. Seebohm's specimens are now incorporated, has been at my service.

The conclusion arrived at is that there are three Chinese forms entitled to specific or subspecific rank. I include the Formosan bird, for although the island is now politically part of Japan, it has hitherto been included ornithologically in China.

These three forms are quite distinct from the Indian species, and have certain constant characters by which they may be distinguished *inter se*. They were all recognized by Père David, who, however, subsequently modified his